

Notice of Allowability

Application No.

10/769,599

Applicant(s)

ADAMOVICH ET AL.

Examiner

Joseph L. Williams

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-42.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 4/12/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

DETAILED ACTION

Election/Restrictions

The response filed on 11 April 2006 has been entered and is deemed persuasive. The Examiner therefore withdraws the restriction requirement of 06 March 2006 and will examine claims 1-42.

Information Disclosure Statement

On the IDS filed on 12 April 2004, US Patent Application Numbers 09/931,948 and 10/233,470 have not been considered because the documents are published documents.

Allowable Subject Matter

1. Claims 1-42 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding independent claim 1, the prior art of record neither shows nor suggest an organic light emitting device comprised of, in part, phosphorescent emissive material in the host material on the anode-side of the emissive layer is about 1% to about 50%, the concentration of the phosphorescent emissive material in the host material on the cathode-side of the emissive layer is about 0.5% to about 20%, and the difference between the concentrations of the phosphorescent emissive material in the host material on the anode-side of the emissive layer and the cathode side of the emissive layer are at least about 0.5%.

Regarding independent claim 12, the prior art of record neither shows nor suggest an organic light emitting device comprised of, in part, the concentration of the

phosphorescent emissive material in the host material on the anode-side of the emissive layer is about 1% to about 50%, the concentration of the phosphorescent emissive material in the host material on the cathode-side of the emissive layer is about 0.5% to about 20%, and the ratio of the concentrations of the phosphorescent emissive material in the host material on the anode-side of the emissive layer to the cathode side of the emissive layer is at least about 1.25:1.

Regarding independent claim 23, the prior art of record neither shows nor suggest an organic light emitting device comprised of, in part, phosphorescent emissive material in the host material on the cathode-side of the emissive layer is about 1% to about 50%, the concentration of the phosphorescent emissive material in the host material on the anode-side of the emissive layer is about 0.5% to about 20%, and the difference between the concentrations of the phosphorescent emissive material in the host material on the cathode-side of the emissive layer and the anode-side of the emissive layer are at least about 0.5%.

Regarding independent claim 32, the prior art of record neither shows nor suggest an organic light emitting device comprised of, in part, the emissive layer comprises a host material and a phosphorescent emissive material, and wherein the concentration of the phosphorescent emissive material in the host material on the cathode-side of the emissive layer is about 1% to about 50%, the concentration of the phosphorescent emissive material in the host material on the anode-side of the emissive layer is about 0.5% to about 20%, and the ratio of the concentrations of the

phosphorescent emissive material in the host material on the cathode-side of the emissive layer to the anode-side of the emissive layer is at least about 1.25:1.

Regarding independent claim 41, the prior art of record neither shows nor suggest an organic light emitting device comprised of, in part, an emissive layer comprises a first sublayer, a second sublayer and a third sublayer, each of which comprises a host material and a phosphorescent emissive material, wherein: the first sublayer is on the anode-side of the emissive layer and the concentration of the phosphorescent emissive material in the host material in the first sublayer about 1% to about 50%, the third sublayer is on the cathode-side of the emissive layer and the concentration of the phosphorescent emissive material in the host material in the third sublayer about 1% to about 50%', and the second sublayer is disposed between the first sublayer and the third sublayer, and the concentration of the phosphorescent emissive material in the second sublayer is about 0.5% to about 20%; and wherein the difference between the concentrations of the phosphorescent emissive material in the host material in the first sublayer and in the second sublayer is at least about 0.5%, wherein the first sublayer has a higher concentration of the phosphorescent emissive material than the second sublayer, and the difference between the concentrations of the phosphorescent emissive material in the host material in the third sublayer and the second sublayer are at least about 0.5%, wherein the third sublayer has a higher concentration of the phosphorescent emissive material than the second sublayer.

Regarding independent claim 42, the prior art of record neither shows nor suggest an organic light emitting device comprised of, in part, an emissive layer comprises a first sublayer, a second sublayer and a third sublayer, each of which comprises a host material and a phosphorescent emissive material, wherein: the first sublayer is on the anode-side of the emissive layer and the concentration of the phosphorescent emissive material in the host material in the first sublayer about 1% to about 50%; the third sublayer is on the cathode-side of the emissive layer and the concentration of the phosphorescent emissive material in the host material in the third sublayer about 1% to about 50%; and the second sublayer is disposed between the first sublayer and the third sublayer, and the concentration of the phosphorescent emissive material in the second sublayer is about 0.5% to about 20%', and wherein the ratio of the concentrations of the phosphorescent emissive material in the host material in the first sublayer and in the second sublayer is at least about 1.25:1, and the ratio of the concentrations of the phosphorescent emissive material in the host material in the third sublayer and in the second sublayer is at least about 1.25:1.

Due to their dependency, claims 2-11, 13-22, 24-31, and 33-40 are necessarily allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP2005108665 discloses the state of the art for light emitting devices.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Williams whose telephone number is (571) 272-2465. The examiner can normally be reached on M-F (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Joseph L. Williams
Primary Examiner
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